235 Promenade Street, Suite 393
Providence, RI 02908
401-633-0550
info@nbep.org
www.nbep.org

NARRAGANSETT BAY ESTUARY PROGRAM

Meeting Notes
Science Advisory Committee Meeting
August 25, 2020   1:00p-3:00p
Virtual via Zoom

ATTENDEES

NBEP Staff: Mike Gerel, Courtney Schmidt, Julia Bancroft, Julia Twichell, Gaby Placido, Katherine Altamirano

SAC Committee Members: Co Chairs: Sue Kiernan and Jamie Vaudrey; Mark Cantwell, Richard Carey, Tim Gleason, Rob Johnston, Paul Mathisen, Warren Prell, Charles Roman, Dave Taylor, Alicia Timme-Laragy

Guests: Dan Codiga, Richard Friesner, Soroush Kouhi, Kenny Raposa, and Emily Shumchenia

---

OUTCOMES
all met

1. Gain consensus on process for member nomination.
2. Highlight two (2) science indicator updates.
3. Introduce working groups, and figshare (a mechanism for NBEP to share technical reports).

All information about the SAC meetings is available on our website: http://nbep.org/about/science-advisory-committee/. All meeting materials are under the tab "meeting material" towards the bottom of the page.

ACTION ITEMS

1. Finalize member nomination process and send to committee
2. Create member slate, and begin process to nominate new committee members
3. Share final links to Dr. Codiga's technical reports and the benthic habitat storymap (included below in their specific sections)

OXYGEN, CHLOROPHYLL, & TEMPERATURE

Dr. Dan Codiga shared results from his assessment of oxygen, chlorophyll, and temperature of Narragansett Bay. Dr. Codiga reported several related analysis of Narragansett Bay oxygen, chlorophyll, temperature, and influencing factors (nitrogen load, river flow, salinity, stratification, physical drivers) through 2017 to help improve understanding of hypoxia and eutrophication. He updated work from the2017 *State of Narragansett Bay and Its Watershed*. For both the relatively dry year, 2016, and the relatively wet year, 2017, hypoxia was among the least severe to date bay-wide. Weaker hypoxia in 2017 than prior years with comparable river flow is one of the strongest indications that bay hypoxia has responded to reduced nutrient loads. When river flow is intermediate both stratification and nitrogen loads are also generally intermediate, but either strong or weak hypoxia has occurred, suggesting that other factors are important under these conditions. The seasonal Chlorophyll Index from time series measurements, refined here to better capture regional patterns and changes, reveals inter-annual variability that is more independent from site to site and less tightly linked to

river flow than oxygen. Spatial survey chlorophyll, from both shallow and deep areas of the bay, shows a stronger decline during the past several years after load decreases than is seen in the Chlorophyll Index from time series observations, which are mostly from deeper locations; however, in 2017 both declined markedly. Long-term trends spanning all years of fixed site time series observations include warming of surface waters at a rate comparable to that seen in independent analyses region-wide, and warming of deep waters at a rate about twice as high. Salinities are decreasing, more strongly near the surface. Stratification is declining, due mainly to salinity and also weakly due to temperature, but at a rate unlikely to strongly impact hypoxia.

Dr. Codiga plans to expand this work soon and is finalizing a contract with NBEP to do so. This contract will update the assessment through 2019 (or 2020 if data are available) and explore other temperature datasets which overlap the fixed site monitoring network.

PROCESS FOR NEW MEMBER NOMINATION

Courtney introduced a process for nominating members to the SAC by sharing two documents – (1) a matrix of current members and their expertise coupled with a sample slate of nominees and (2) a written process for nomination and selection. Both the matrix and the process are based on the materials used for the Steering Committee. This was intentional to standardize practices across the committees. The matrix details the length of service, location, affiliation type, and expertise (general to detailed categories). The expertise categories are based on where the current members fall, as well emerging needs of the SAC. The process is based detailed, yet straightforward. It begins with nominating individuals to the slate, which is then vetted by the NBEP and co-chairs of the SAC. Once interest is confirmed, the individuals are added to the matrix to ensure they are filling gaps. The SAC then gets the opportunity to discuss the slate and are shared the matrix, biographical information, and anything else pertinent to the discussion. The SAC will take this opportunity to suggest alternates or verify that the slate fills required gaps. Once this process is complete, the NBEP with consultation by the SAC co-chairs will recommend the slate to the Executive and Steering Committees, who are responsible for appointing members to the SAC.

All new members are then asked to sign the SAC Expectation documents, and once signed will be formally seated at the next meeting.

WORKING GROUPS

Based on Steering Committee comments and staff skillsets, a good niche for NBEP is convening and coordinating topical working groups. The outcomes of these working groups include greater coordination, information exchanges, and collaborative next step decision-making. These working groups have open forums and are independently convened. They will work to gain consensus on the purpose, deliverables, and schedules. By being purpose built, these groups will address their topics and disband when those purposes are met. Working groups include outside experts and SAC members. Currently, NBEP is developing working groups in the following areas: social science, submerged aquatic vegetation (SAV), salt marsh, modeling, and water clarity. More information and meeting materials will become available on the NBEP website.

BENTHIC HABITAT STORY MAP

Emily Shumchenia of E&C Enviroscape shared our most recent science update, a storymap highlighting the increase in benthic habitat quality over the last 30 years. This worked stemmed from an indicator chapter on benthic habitat in Narragansett Bay. For the *State of Narragansett Bay and Its Watershed*, Dr. Shumchenia and colleagues communicated results from sediment profile imagery (SPI) conducted in 1988 and 2008. They updated their work in 2018 through a competitive grant process with NBEP to do research needed as a result of the *State of Narragansett Bay and Its Watershed*. The storymap is written for a general audience. It details the importance of the benthic habitat and uses the images to highlight how sediment quality has improved over

the last 30 years. It also points out areas which are still impacted. The storymap combines images, maps, and videos to tell the story.

DISSEMINATING INFORMATION

Courtney discussed two ways NBEP disseminates information. The first is through our GIS DataHub developed by Julia Twichell with assistance from Julia Bancroft. This hub allows NBEP to share data, and story maps readily. The second way is through Figshare which is a website designed to share data, reports, and any media NBEP chooses. Figshare allows NBEP to attached Digital Object Identifiers (DOIs) to entries which can be tracked using citation tracking software. This allows our partners to receive the credit they deserve for their hard work.

UPCOMING OPPORTUNITIES

Please stay tuned for upcoming CCMP workgroup meetings. If you would like to join a workgroup, please let NBEP know. More information about our CCMP process can be found here.

As you find out more opportunities, please share them with NBEP.